

The Wilson Declaration filed January 7, 2002 clearly shows unsequenced DNA fragments which are uncharacterized. The Wilson Declaration further provides standard procedures used by skilled artisans. The Stine Declaration states no undue experimentation is required to screen plants since these screening procedures are standard and conventionally done by plant breeders. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 1-22 remain rejected under 35 U.S.C. §112, first paragraph for enablement. Applicant submits the purpose of the Stine Declaration is to describe what is routine in plant breeding including selection for agronomic traits. The Stine Declaration states no undue experimentation is required to screen plants since the screening procedures are standardly done by plant breeders. The present invention involves selecting whole plants and not selecting genes. The Wilson Declaration clearly shows unsequenced DNA fragments which are uncharacterized. The Wilson Declaration further provides standard procedures used by skilled artisans. In the Wilson Declaration the "piece of unsequenced DNA" represents this uncharacterized DNA and represents any uncharacterized DNA. Applicants have fully enabled the method of the present invention for any uncharacterized DNA. There is nothing unique with any other uncharacterized DNA and their use in the methods of the present invention.

Applicant submits the uncharacterized DNA fragment will either have, or not have, one or more regulatory DNA fragment. If no regulatory fragment is present, then plants having improved agronomic characteristics will not be obtained.

Applicant submits Holl et al., and Kamra et al. are references which report results that are now not generally accepted by the scientific community because: 1) no substantiation of these results has been reported over the approximately twenty years since the original report; 2) no convincing molecular and genetic evidence has been provided to support the claims and research; and 3) a skilled artisan would view the Holland and Kamra publications and results produced with such described DNA uptake experiments as artefactual. Withdrawal of this rejection is respectfully requested.

Claims 1-22 are rejected under 35 U.S.C. §112, second paragraph as being indefinite. As discussed above, Applicant submits that "uncharacterized" is the same standard meaning as recognized by skilled artisans. Applicant further submits that "improved agronomic characteristics" are identified in the specification on page 6, line 12 through 16, and include resistance to drought and heat stress, resistance to insects, resistance to bacterial and fungal pests, increased vigor, increased standability, superior combinability and superior yield. A skilled artisan would know to compare the plant derived from the method of the present invention versus the original recipient plant. Withdrawal of this rejection is respectfully requested.

Claims 1, 2, 8 and 9 remain rejected under 35 U.S.C. §102(b) as being clearly anticipated by Masoud et al. The Examiner maintains that Masoud et al. employs uncharacterized DNA to transform tobacco and the length or sequence of the rice gene was not described. Applicant submits in the Materials and Methods section of Masoud the gene is described as an Eco R1 fragment of 0.66 Kb. The sequence of this gene was known (Kondo, 1989) and the gene was described on a cysteine proteinase inhibitor (oryzacystatin-I) encoding a protein of 102 amino acids. Also the linker sequence was known because it was used for cloning purposes.

Applicant submits Masoud et al. describes the transformation of a plant with a construct which comprises the CaMV 35S promoter, cDNA encoding cysteine proteinase inhibitor and NOS 3' region. This construct is fully characterized. Thus, Masoud et al. teaches the transformation of plants with characterized DNA. The Examiner asserts that the DNA taught by the reference has not been fully "characterized" to show the intron and other regulatory regions for example. However, the DNA of the reference is a cDNA encoding cysteine proteinase inhibitor. There does not appear to be any disclosure in the reference concerning the genomic structure of the gene. Whether the genomic structure of this gene is known is not relevant since the DNA used to transform the plants is fully characterized as noted above. There is no disclosure in Masoud of using genomic DNA for a cysteine proteinase inhibitor to

transform plants. Thus, Masoud utilizes a fully characterized DNA for plant transformation. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 1, 2, 8 and 9 remain rejected under 35 U.S.C. §102(b) as being clearly anticipated by EP 299,552 (SOLVAY). Applicant submits that Solvay teaches use of a "multifunctional linker" to facilitate homologous recombination in the production of transgenic plants. Solvay does not teach the use of uncharacterized DNA to generate transgenic plants for use in a breeding program. In addition, transfer of wheat genes into barley is accomplished here by injecting wheat DNA into the embryo sacs of barley plants. This approach to plant transformation has never been shown to work and there are no reports in the literature documenting its successful application. A skilled artisan would conclude that transformation using this approach was not achieved by Solvay. Accordingly, withdrawal of this rejection is respectfully requested.

The Examiner has rejected claims 1, 4, 8 and 11 under 35 U.S.C. §102(b) as being anticipated by Korohoda et al. Applicant submits the Korohoda publication is currently not accepted in the scientific community since because: 1) no substantiation of these results has been reported over the approximately twenty years since the original report; 2) no convincing molecular and genetic evidence has been provided to support the claims and research; and 3) a skilled artisan would view the Holland and Kamra publications and results produced with such described DNA uptake experiments as artefactual. Withdrawal of this rejection is respectfully requested.

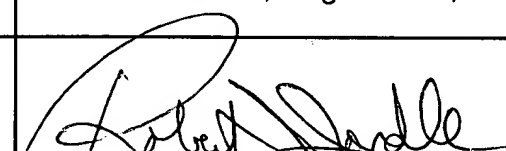
The Examiner has rejected claims 1, 4, 6, 8, 11 and 13 under 35 U.S.C. §102(b) as being anticipated by Zhou et al. Applicant submits there is no reason for a skilled artisan to believe that any of the traits seen in "recipient" plants resulted from the application of exogenous DNA. No convincing molecular or genetic evidence was ever produced to support the claims of Zhou and this work never gained acceptance as an authentic example of plant transformation. Accordingly, withdrawal of this rejection is respectfully requested.

The Examiner has rejected claims 1, 4, 6, 8, 11 and 13 under 35 U.S.C. §102(b) as being anticipated by Soyfer et al. in light of Turbin et al. Applicant submits subsequent

developments in transformation technology over the past twenty years have allowed accurate characterization of putative transformants to be made (southern blot analysis, per). There are no confirmed reports of transformation occurring following simple application of exogenous DNA to plants or plant parts as described by Turbin et al., Soyfer, and Zhou. Accordingly, withdrawal of this rejection is respectfully requested.

The Examiner has rejected claims 1-22 under 35 U.S.C. §103(a) as being unpatentable over EP 299,552 (SOLVAY). As discussed above, Applicant submits that Solvay teaches use of a "multifunctional linker" to facilitate homologous recombination in the production of transgenic plants. Solvay does not teach the use of uncharacterized DNA to generate transgenic plants for use in a breeding program. In addition, transfer of wheat genes into barley is accomplished here by injecting wheat DNA into the embryo sacs of barley plants. This approach to plant transformation has never been shown to work and there are no reports in the literature documenting its successful application. A skilled artisan would conclude that transformation using this approach was not achieved by Solvay. Accordingly, withdrawal of this rejection is respectfully requested.

In view of the above amendments and remarks, it is submitted that the claims satisfy the provisions of 35 U.S.C. §§ 102, 103 and 112 and are not obvious over the prior art. Reconsideration of this application and early notice of allowance is requested.

SIGNATURE OF APPLICANT, ATTORNEY OR AGENT REQUIRED			
NAME AND REG. NUMBER	Robert J. Jondle, Reg. No. 33,915		
SIGNATURE		DATE	September 20, 2002